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DEVELOPMENTS IN ILLINOIS AND INDIANA IN 1950[1]

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ABSTRACT

In all, 4,424 wells were drilled for oil and gas in Illinois and Indiana in 1950 as compared with 4,018 in 1949, an increase of 10 per cent. Total oil production decreased 3 per cent, from 74,139,000 barrels in 1949 to 71,914,000 barrels in 1950.[4] Wildcat drilling increased from 1,217 completions in 1949 to 1,334 completions in 1950. Fifty-five new pools,[5] 102 extensions, and 64 new producing zones were discovered in the two states in 1950.

Most of the discoveries in 1950 were in Mississippian formations, but the Devonian limestone produced oil or gas in four new pools, and Pennsylvanian sandstone in three. There were no discoveries of new pools in Silurian or Ordovician formations.

INTRODUCTION

In Illinois and Indiana, 4,424 wells for oil and gas were drilled in 1950 as compared with 4,018 in 1949, an increase of 10 per cent. Total oil production decreased 3 per cent, from 74,139,000 barrels in 1949 to 71,914,000 barrels in 1950. Wildcat drilling increased from 1,217 completions in 1949 to 1,334 completions in 1950, an increase of 10 per cent. Fifty-five new pools, 102 extensions, and 64 new producing zones were discovered in the two states in 1950.

In the Illinois basin area—southern Illinois and southwestern Indiana—51 out of 58 discovery wells of new pools discovered in 1950 produced from Mississippian formations (27 Chester series and 24 Lower Mississippian). Of the remaining 7 discovery wells of new pools, 3 produced from Pennsylvanian sandstone and 4 from Devonian limestone.

ILLINOIS

BY ALFRED H. BELL

In Illinois 2,894 wells were drilled for oil and gas in 1950 as compared with 2,737 in 1949, an increase of approximately 6 per cent. (These figures are exclusive of water- or gas-input wells, salt-water disposal wells, and old wells worked over.) Of the 2,894 wells drilled, 830 are classified as wildcat wells as compared with 746 in 1949, an increase of 11 per cent. Of the 830 wildcat wells drilled in 1950, 325 were located more than 2 miles from production ("wildcats far"), of which 14, or 4.3 per cent, were successful. In 1949, 7 per cent of the wildcats far were successful. Drilling in 1950 resulted in 1,286 oil wells, 19 gas wells, and 1,589 dry holes.

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The writers gratefully acknowledge the assistance of Virginia Kline and Kathryn C. Irving, both of the Illinois State Geological Survey, in the preparation of the manuscript.

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[4] *U. S. Bur. Mines Monthly Petroleum Statement 334* (December, 1950).

[5] The distinction between "pool" and "field," which is made in other areas and by the committee on statistics of exploratory drilling, is not made in this article, and the two words are here used interchangeably. Such a distinction would be difficult to maintain for the Illinois-Indiana area because of the large number of producing formations, several of which are confined to a relatively small stratigraphic section, and because of the large number of separate productive lenses in a single producing zone. The number of oil and gas pools (defined as separate reservoirs) is not accurately known but is undoubtedly more than a thousand for Illinois alone. If a field is defined as all of the pools on a single well defined structural feature, the Southeastern Illinois field located on the LaSalle anticlinal belt is a good example. But for many of the newer producing areas in the Illinois basin there is much room for difference of opinion as to a proper grouping into "fields." The word pool is used in this report to mean, in general, a separate producing area, but there are numerous exceptions where two or more separate producing areas are grouped together under a single pool name.

Of the 830 wildcat wells drilled, 25 discovered new pools and 77 discovered extensions to pools (Tables I and II). In addition 25 wells, most of which can not be designated properly as exploratory wells, discovered additional producing zones in known producing areas (Table III).

Most of the drilling in Illinois in 1950 was in the deep-basin area of southeastern Illinois. Wells were drilled in 52 counties in the state in 1950 and producing wells were drilled in 29 counties. Half the total wells completed were located in 7 counties, and 86 per cent of the total wells completed were located in 17 counties. The 7 counties having the largest number of wells drilled in 1950 are White, 290; Wabash, 223; Hamilton, 207; Wayne, 205; Lawrence, 184; Fayette, 173; and Clinton, 165.

There were no major pools among the 25 discovered in 1950. Those having the most producing wells at the end of the year were Carlyle North in Clinton County with 37 and Oskaloosa in Clay County with 36.

Total oil production in Illinois in 1950 was 61,922,000 barrels as compared with 64,501,000 barrels in 1949, a decrease of 4 per cent. Average daily production in 1950 was approximately 170,000 barrels as compared with 177,000 barrels in 1949. The daily average by months varied from a low of 165,000 barrels in January to a high of 176,000 barrels in March.

EXPLORATORY DRILLING

Exploratory drilling in 1950 was done in 52 counties in Illinois as compared with 54 counties in 1949. These counties extend from Boone and Winnebago on the Wisconsin border to Williamson and Saline in the south, and from Adams County east to Vermilion County. Nearly all the new pools discovered in Illinois in 1950 are located within 2 or 3 miles of previous production. The only noteworthy exception is the Marion pool, Williamson County (Table I, No. 17), which is about $8\frac{1}{2}$ miles south of the nearest previous production, the West Frankfort pool in Franklin County. Initial production from this well was 25 barrels of oil and 15 barrels of water from the Aux Vases sandstone and, to the end of 1950, no offsets had been drilled and no pipe-line runs had been reported from the pool. Even though this discovery may not be a commercial success, it is significant because it indicates the presence of oil farther south on the southern margin of the Illinois basin than any previous production except in the Junction pool, Gallatin County, which is located about 40 miles east.

A list of some of the most noteworthy dry holes completed in 1950 is given in

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TABLE I. DISCOVERY WELLS OF NEW FIELDS IN ILLINOIS IN 1950

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Bbl.)[a]	Date of Completion	No. Wells Producing in Pool, Dec. 31, 1950
1. Ab Lake West	Gallatin	Coy & Vandenbark, L. Drone 1	31-8S-10E	2,754	Aux Vases	2,727	38	11-7	1
2. Bartelso East	Clinton	Deep Rock, C. Johnpeter 1	23-1N-3W	2,564	Devonian	2,528	99	9-5	1
3. Calhoun Central	Richland	Sanders & Fye, C. Wells 1	3-2N-10E	3,284	McClosky	3,278	8	10-17	1
4. Calhoun East	Richland	Johnson & Davis, C. W. Moore 1	12-2N-10E	3,280	McClosky	3,270	382	1-17	5
5. Cantrell South	Hamilton	Wrather & Duncan, R. P. Droit 1	7-7S-5E	3,393; PB 3,210	Rosiclare	3,209	430; 20	6-27	10
6. Carlyle North	Clinton	T. M. Conrey, King 1	23-3N-3W	1,151	Bethel	1,147	10	1-17	37
7. Claremont Gas	Richland	George & Wrather, W. Malone 1	17-3N-14W	3,315; PB 3,230	Rosiclare	3,198	2,833,000 cu. ft.	11-14	1
8. Ellery West	Wayne	Skiles, Allison 1	23-2S-9E	3,317	Lower Ohara; Rosiclare	3,270; 3,307	285; 5	8-22	13
9. Enfield	White	Dedman & Herndon, I. Dunn 1	29-5S-9E	3,296	Aux Vases	3,280	175; 3	5-29	2
10. Flannigan	Hamilton	Stewart Oil, Johnson 1	28-6S-5E	3,253	Aux Vases	3,240	148; 8	8-1	5
11. Hord	Clay	Ashland *et al.*, G. F. Van Dyke 1	14-5N-6E	2,954; PB 2,850	McClosky	2,810	300; 200	12-31	1
12. Inman South	Gallatin	A. Valter, L. B. Drone 1	27-8S-9E	2,494	Cypress	2,474	35	8-8	•
13. Kenner South	Clay	Sohio, R. Fleming *et al.* 1	2-2N-5E	3,000; PB 2,904	Rosiclare	2,871	65; 4	9-5	1
14. Kinmundy	Marion	H. Luttrell, T. E. Robb 1	19-4N-3E	1,917	Bethel	1,910	27; 35	6-13	1
15. Livingston South	Madison	Geo. Zicos, J. Repovsch 1	28-6N-6W	543	Pennsylvanian	538	24	2-21	5
16. Long Branch	Saline	W. O. Morgan, Cole 1	20-7S-6E	3,264; PB 3,212	McClosky	3,188	47; 40	1-31	3
17. Marion	Williamson	T. M. Pruett, Norris Weisbroht Comm. 1	7-9S-3E	2,560; PB 2,400	Aux Vases	2,385	25; 15	5-16	1
18. Omaha West	Saline	Skiles, Bramlett E-1	36-7S-7E	2,846	Cypress; Aux Vases	2,496; 2,800	63	12-5	1
19. Orchardville	Wayne	Henson Drlg., Richison 1	29-1N-5E	2,906	McClosky	2,901	22	3-21	1
20. Oskaloosa	Clay	Texas, C. T. Gabbert 1	35-4N-5E	2,891; PB 2,625	Bethel	2,595	5; 13	3-21	36
21. Patoka West	Fayette	C. J. Simpson, F. Bonnell 1	15-4N-1W	1,425	Bethel	1,415	12; 80	10-24	5
22. Reservoir	Jefferson	Gulf, Ill. Cities Water Unit 1	28-1S-3E	2,629	McClosky	2,618	10; 22	11-7	1
23. Ritter	Richland	Calvert, C. L. Jordan 1	25-3N-10E	3,210	Rosiclare	3,198	991; 18	6-6	2
24. Roland West	Saline	J. F. Balderson, B. F. Bruce 1	24-7S-7E	3,161; PB 2,951	Aux Vases	2,934	52; 6	9-5	1
25. Whittington South	Franklin	W. Duncan, U. S. Coal & Coke 1	4-6S-3E	2,953; PB 2,600	Cypress	2,578	41; 5	6-20	10

[a] Oil and water.
• Consolidated with Inman West Consolidated.

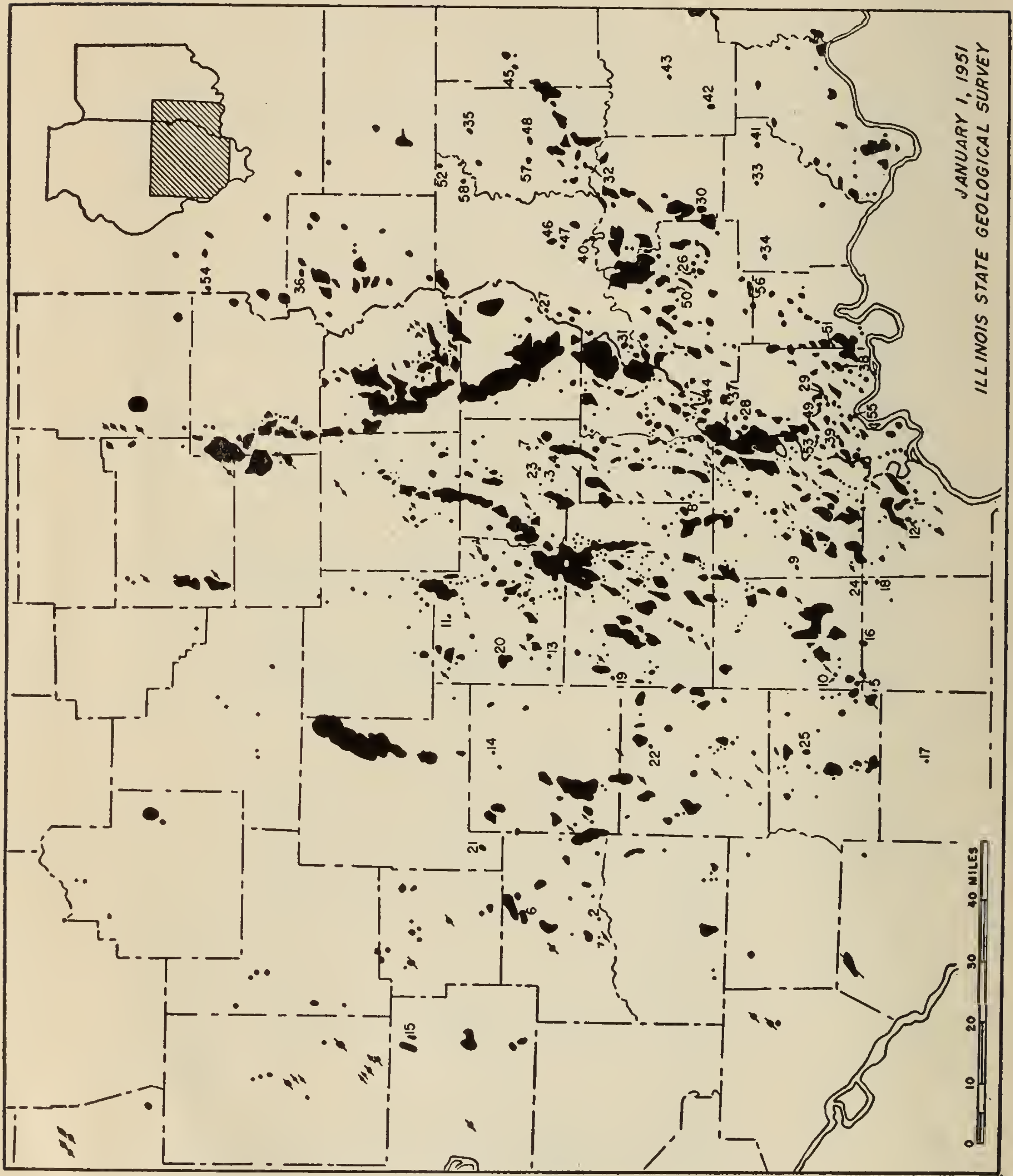

FIG. 1.—Oil and gas pools in Illinois and Indiana. Numbers indicate new pools discovered in 1950. See Tables I and VII.

Table II. Discovery Wells of Extensions to Pools in Illinois in 1950

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Bbls.)[a]	Date of Completion
1. Albion Cons.	Edwards	Calvert-Willis & W. Duncan, G. R. Evans 1	2-3S-10E	1,990	Biehl	1,962	113	3-7
2. Beaver Creek	Clinton	T. R. Kerwin, Bass 1	1-3N-3W	1,153	Bethel	1,147	14; 5	6-20
3. Beaver Creek South	Clinton	Ben Hess, Sohn 1	14-3N-3W	1,118	Bethel	1,100	57; 8	9-26
4. Beaver Creek South	Clinton	T. M. Conrey *et al.*, A. & K. Kneier 1	12-3N-3W	1,115	Bethel	1,107	46; 12	9-26
5. Benton North	Franklin	B. D. Jones, W. J. Todd 1	25-5S-2E	2,466	Cypress	2,456	180; 3	1-31
6. Bible Grove North	Effingham	Sun Drlg., W. D. Lake 1	15-6N-7E	2,985; PB 2,562	Cypress	2,555	8; 6	12-5
7. Blairsville	Hamilton	C. E. Brehm, E. M. Smith 1	16-4S-7E	3,437; PB 3,350	Aux Vases	3,274	127	5-15
8. Bone Gap South	Edwards	Robinson & Puckett, Coale Cons. 1	20-1S-14W	3,050	Rosiclare	3,042	90	8-1
9. Calhoun Cons.	Richland	F. L. Runyon, D. Olcese 1	4-2N-10E	3,189	Rosiclare	3,184	120; 2	5-23
10. Carlyle North	Clinton	H. Luttrell, H. Dierkes 1	24-3N-3W	1,165	Bethel	1,149	18; 4	4-11
11. Clay City-Noble Cons.	Richland	P. Fulk, C. Robards 1	10-3N-9E	3,642; PB 3,617	Salem	3,456	7; 40	12-5
12. Clay City-Noble Cons.	Wayne	A. Sturm & Son, Gaston 1	25-1S-6E	3,121; PB 3,118	Aux Vases	3,095	119	10-10
13. Clay City-Noble Cons.	Wayne	D. Hopkins, S. Redd 1	6-2S-7E	3,343	McClosky	3,334	8; 21	11-28
14. Clay City-Noble Cons.	Wayne	Watkins Drlg., H. Redd 1	26-1S-6E	3,254	McClosky	3,226	80	6-13
15. Clay City-Noble Cons.	Richland	McDowell & Murvin, Clark 1	15-3N-9E	3,055; PB 2,976	Rosiclare	2,963	17; 9	2-7
16. Clay City-Noble Cons.	Richland	N. C. Davies, B. Wilson 1	4-4N-10E	2,985; PB 2,924	McClosky	2,889	9; 5	3-7
17. Clay City-Noble Cons.	Richland	Miracle & Steber, C. Curry 1	11-3N-9E	2,957	Rosiclare	2,949	475	8-15
18. Clay City-Noble Cons.	Richland	P. Fulk, H. E. Coen *et al.* 1	3-3N-9E	4,786; PB 3,612	Salem	3,450	126; 44	12-19
19. Clay City-Noble Cons.	Richland	Skiles, C. D. Watkins 1	11-3N-9E	2,964	Rosiclare	2,956	370	8-1
20. Concord Central	White	Ashland-Buchman-Fisher, W. L. Clark 4	9-7S-10E	3,013; PB 2,610	Cypress	2,604	24; 50	11-21
21. Cottonwood	Gallatin	Skiles, J. P. Holland 1	28-7S-9E	3,090; PB 2,325	Tar Springs	2,314	268,000 cu. ft.	5-23
22. Crossville	White	Ill. Mid-Continent, Pitland 1	11-4S-10E	3,225; PB 2,925	Bethel	2,906	12	6-20
23. Dale-Hoodville Cons.	Hamilton	W. Duncan, Calvert & Willis, C. Suttle 1	4-6S-6E	3,261; PB 3,140	Aux Vases	3,097	70; 6	2-14
24. Eldorado	Saline	Ryan Oil, L. T. Stinson 1	17-8S-7E	1,950	Palestine	1,934	12; 60	6-6
25. Ellery West	Wayne	Aurora & N. V. Duncan, F. E. Scott 1	27-2S-9E	3,337; PB 3,325	Lower Ohara; Rosiclar	3,290; 3,316	350	10-17
26. Epworth	White	R. A. Harris, Hanna 1	29-5S-10E	3,195; PB 3,130	Rosiclare	3,113	25; 25	2-28
27. Flora	Clay	Hack Drlg., Lewis 1	7-3N-7E	3,085; PB 2,659	Cypress	2,629	19; 6	2-14
28. Goldengate Cons.	White	Sohio, L. J. Williams 1	34-3S-9E	3,342; PB 3,338	Aux Vases	3,324	117; 9	6-20
29. Goldengate Cons.	White	E. A. Obering, Stephens & Pollard 1	35-3S-9E	3,460; PB 3,406	Rosiclare	3,386	20	10-10
30. Gossett	White	George & Wrather, E. Douglas 1	17-7S-8E	3,128; PB 3,072	McClosky	3,050	19; 6	10-3
31. Grandview	Edgar	C. H. Murdock, Bartmes 1	5-12N-13W	480	Pennsylvanian	465	430,000 cu. ft.	9-19
32. Helena	Lawrence	Gopher Drlg., E. Stout *et al.* 1	1-2N-13W	2,460; PB 2,427	McClosky	2,386	10; 1	8-8
33. Herald	White	Miami Oper., J. A. Sutton 1	8-7S-9E	3,072	McClosky	3,062	150	11-7
34. Herald	White	Coy Oil, L. D. Austin 1	28-6S-9E	3,012; PB 2,344	Waltersburg	2,310	18	5-29
35. Herald	White	N. Redwine, C. C. Aud 1	33-6S-9E	3,202; PB 2,394	Waltersburg	2,379	45	6-13
36. Inman East Cons.	Gallatin	J. L. Crawford, Patterson 1	4-8S-10E	2,459	Cypress	2,449	25	11-14
37. Inman West Cons.	Gallatin	Oil Management, Schmitt 2	27-8S-9E	2,805	Aux Vases	2,789	60; 8	11-7
38. Iola South	Clay	Shulman Bros., V. Gibson 1	14-4N-5E	2,475	Bethel	2,463	70; 5	10-31
39. Johnsonville South	Wayne	Robinson & Puckett, E. G. Manahan 1	23-1S-6E	3,197	McClosky	3,184	160	2-7
40. Johnsonville West	Wayne	Nat'l. Assoc. Pet., B. E. Richardson "A" 1	22-1N-5E	2,896	Aux Vases	2,879	30	8-8
41 King	Jefferson	Magnolia, O. Taylor 1	21-3S-3E	2,716	Aux Vases	2,705	46	3-28
42. Lawrence	Lawrence	J. Zanetis, G. Conrad 1	33-3N-11W	1,866	McClosky	1,852	16; 4	5-2
43. Lawrence	Lawrence	Messmer Oil, I. Nesbitt 1	21-3N-11W	1,918; PB 1,900	McClosky	1,874	15; 85	2-21
44. Livingston	Madison	J. Kesl, Jr., Engelke 1	29-6N-6W	545	Pennsylvanian	527	10; 10	5-23
45. Livingston South	Madison	B. Roan, E. Blom 1	27-6N-6W	581; PB 577	Pennsylvanian	569	2; 20	5-23
46. Livingston South	Madison	S Lalor, Quade 1	21-6N-6W	493	Pennsylvanian	480	35	10-10
47. Long Branch	Hamilton	LaGrange Pet., Howard 1	16-7S-6E	2,081	Palestine	2,072	300	9-5
48. Louden	Effingham	Claypool Drlg., J. W. Doty 1	7-8N-4E	1,600; PB 1,592	Cypress	1,560	6; 25	11-7
49. Louden	Effingham	Jones & Simpson, Phillips 1	19-8N-4E	1,549; PB 1,520	Cypress	1,509	50; 24	1-24
50. Louden	Effingham	M. H. Richardson, R. Lily 1-A	18-8N-4E	1,590	Cypress	1,579	10; 30	3-7
51. Maplegrove	Edwards	A. J. Slagter, Jr., Knaust 1	20-1N-10E	3,239	Lower Ohara	3,232	171; 2	6-13
52. Maplegrove East	Edwards	J. Bander *et al.*, Vaughn 1	12-1N-10E	3,272; PB 3,225	Lower Ohara	3,196	25	8-22
53. Maplegrove East	Edwards	J. W. Rudy, M. Koenecke 1	12-1N-10E	3,211	McClosky	3,202	75; 2	8-8
54. Maplegrove East	Edwards	J. W. Rudy, A. Hayner 1	1-1N-10E	3,205	McClosky	3,201	24; 64	5-23
55. Maud Cons.	Wabash	J. F. Balderson, E. G. Mundy 1	33-1N-13W	2,661	Lower Ohara	2,657	135	4-11
56. Maud Cons.	Wabash	Ashland *et al.*, P. Deisher 1	29-1N-13W	2,768; PB 2,530	Bethel	2,510	9; 9	6-20
57. Maud North Cons.	Wabash	Sohio, W. Frese 1	6-2S-13W	2,617; PB 2,608	Bethel	2,570	37; 20	1-24
58. Maunie South	White	C. E. Skiles, E. B. Alford 1	18-6S-11E	2,607	Cypress	2,594	119	6-13
59. New Harmony-Keensburg Cons.	Wabash	Ill. Mid-Continent, Shannon-Schrodt 1	19-2S-13W	2,929; PB 2,485	Cypress	2,468	80; 16	6-6

TABLE II—(*continued*)

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Bbl.)[a]	Date of Completion
60. New Harmony-Keensburg Cons.	Wabasb	C. E. Skiles, E. Schmidt 1	18-2S-13W	2,901; PB 2,837	Rosiclare	2,815	100	3-21
61. Olney South	Richland	Miami Oper., E. Kurtz 1	21-3N-10E	3,282; PB 3,182	Rosiclare	3,163	113	12-31
62. Oskaloosa	Clay	Texas, R. Harrell 1	34-4N-5E	2,604	Bethel	2,581	285	4-18
63. Oskaloosa	Clay	F. B. Drlg., R. Harrell 1	3-3N-5E	2,680	Bethel	2,666	65	5-16
64. Parkersburg West	Richland	D. Baines, J. Bossette 1	26-2N-10E	3,267	McClosky	3,260	132; 100	2-14
65. Phillipstown Cons.	White	J. Hinkle, Perkins 1	24-3S-10E	3,215; PB 3,200	McClosky	3,186	40; 70	12-31
66. Phillipstown Cons.	White	J. Buchman, Sturm 1	36-3S-10E	3,163; PB 3,116	Lower Ohara	3,096	246	8-29
67. Ritter	Richland	J. Stapp, S. Dobbs 1	30-3N-11E	3,248	McClosky	3,238	1,056	7-11
68. Rochester	Wabash	J. Reznik, H. C. Waddle 1	22-2S-13W	1,969	Waltersburg	1,950	105; 20	7-18
69. Rural Hill	Hamilton	Stewart Oil, M. Cluck 1	9-6S-6E	3,104	Aux Vases	3,076	207; 10	8-22
70. Rural Hill	Hamilton	Stewart Oil, N. Porter 1	1-6S-5E	3,218	Aux Vases	3,173	200; 40	11-14
71. Rural Hill	Hamilton	D. Hopkins, Burnett-Johnson Comm. 1	26-6S-5E	3,362; PB 3,212	Aux Vases	3,166	45; 50	10-17
72. Rural Hill	Hamilton	Stewart Oil, U. Foster 1	22-6S-5E	3,212	Aux Vases	3,178	117	12-19
73. Sailor Springs North	Clay	George & Wrather, H. Ditter 1	18-4N-8E	3,045; PB 3,010	McClosky	2,992	3; 68	11-21
74. St. James	Fayette	R. Halbert *et al.*, Reece 1	18-6N-3E	1,792; PB 1,617	Cypress	1,600	12; 5	6-6
75. Sumpter South	White	M. & M. Drlg., Hubele 1	3-5S-9E	2,584	Tar Springs	2,544	95	1-31
76. Walpole	Hamilton	Oil Management, Howard 1	4-7S-6E	3,197; PB 3,192	Aux Vases	3,185	14; 100	5-23
77. Zenith	Wayne	J. W. Everhart, Harrell 1	35-2N-5E	2,960	McClosky	2,953	32	1-17

[a] Oil and water.

TABLE III. DISCOVERY WELLS OF ADDITIONAL PRODUCING ZONES IN POOLS IN ILLINOIS IN 1950

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Depth to Top (Feet)	Initial Production (Bbl.)[a]	Date of Completion of Discovery Well
1. Akin West	Franklin	Taylor & Schumaker, U. S. Coal & Coke 6	16-6S-4E	2,716	Cypress	2,698	50; 1	7-3
2. Cantrell South	Hamilton	George & Wrather—W. Duncan, R. Hunro 1	18-7S-5E	3,210; PB 3,138	Aux Vases	3,110	300	7-18
3. Cantrell South	Hamilton	J. A. Wasson, Carlisle 1	7-7S-5E	3,327	McClosky	3,323	62	11-7
4. Centerville East	White	Fox & Fox, Barbre-Williams 2-A	18-4S-10E	2,239; PB 2,230	Palestine	2,224	100; 50	3-14
5. Centerville East	White	Skelly, Barbre "A" 3	18-4S-10E	3,230; PB 2,835	Hardinsburg	2,617	31	9-19
6. Clay City-Noble Cons.	Richland	P. Fulk, H. E. Coen *et al.* 1	3-3N-9E	4,786; PB 3,612	Salem	3,450	126; 44	12-19
7. Elbridge	Edgar	Nat'l. Assoc. Pet. & Continental, W. I. Maddock "A" 1-X	36-13N-11W	777	Pennsylvanian	758	26; 85	9-19
8. Eldorado	Saline	Ryan Oil, L. T. Stinson 1	17-8S-7E	1,950	Palestine	1,934	12; 60	6-6
9. Enfield	White	Superior, T. J. Dunn 1	29-5S-8E	3,498; PB 3,451	McClosky	3,420	21; 6	6-20
10. Epworth	White	R. A. Harris, Hanna 1	29-5S-10E	3,195; PB 3,130	Rosiclare	3,113	25; 25	2-28
11. Grandview	Edgar	C. H. Murdock, Bartmes 2	5-12N-13W	572	Salem	565	124,000 cu. ft.	11-21
12. Helena	Lawrence	Gopher Drlg., E. Stout *et al.* 1	1-2N-13W	2,460; PB 2,427	McClosky	2,386	10; 1	8-8
13. Inman South	Gallatin	Coy Oil, W. Miner 1	22-8S-9E	2,497	Tar Springs	2,124*	22	10-3
14. Long Branch	Hamilton	LaGrange Pet., Howard 1	16-7S-6E	2,081	Palestine	2,072	300	9-5
15. Maplegrove East	Edwards	Miracle & Steber, J. A. Weir 1	12-1N-10E	3,215; PB 2,415	Waltersburg	2,397	58; 3	8-22
16. Maud North Cons.	Wabash	D. Hopkins, G. Wirth 1	18-1S-13W	2,672; PB 2,144	Tar Springs	2,115	190	3-21
17. Maunie West	White	Skiles, G. Ackerman 1	3-6S-10E	2,963	Bethel	2,828*	35	9-12
18. Maunie West	White	Skiles, G. Ackerman 1	3-6S-10E	2,963	Aux Vases	2,955*	35	9-12
19. Panama	Bond	Mayor Drlg., Brown 1	30-7N-3W	718	Golconda	701	8	1-10
20. Parkersburg South	Edwards	Cullum & Lawbead, F. Koehler 1	8-1N-14W	1,394	Pennsylvanian	1,387	41; 23	6-13
21. St. Francisville East	Lawrence	J. E. Bauer, J. M. Brevoort 2	10-2N-11W	1,467; PB 1,463	Hardinsburg	1,457	40; 180	6-13
22. Woburn	Bond	D. Hopkins, Nelson 1	10-6N-2W	885	Cypress	882	14; 25	9-19
23. Woburn South	Bond	Miami Oper., Besserman 2-A	16-6N-2W	868	Cypress	860	40; 2	6-27

[a] Oil and water.
* Producing from 2 pays.

Table IV. These include a test of the Trenton limestone in the Assumption North pool, Christian County (No. 2), a test of the Silurian limestone in the Ayres gas pool, Bond County (No. 1), and a test of the St. Peter sandstone in the Dudley pool, Edgar County (No. 6). The deepest dry hole (No. 21), total depth 4,035 feet, tested the "Trenton" limestone near the Dubois West pool in Washington County.

No new Niagaran reef pools were discovered in Illinois in 1950 but exploration for them is continuing. Well numbers 9 and 14, in Table IV, were drilled on seismograph highs in an area recommended as having fair possibilities for reef production by H. A. Lowenstam.[6] There still remains a large territory which has been little explored for Niagaran reef production. Well No. 1, Table IV, on the Ayers anticline was the only Silurian test completed in 1950 in the area recommended as having good prospects for the discovery of Niagaran reef production. It did not encounter reef rock in the Silurian. It is located $1\frac{1}{4}$ miles east of a previous test well which penetrated reef outwash.[7]

TABLE IV. SELECTED LIST OF DRY TESTS IN ILLINOIS IN 1950

Pool	*County*	*Company and Farm*	*Location*	*Total Depth (Feet)*	*Deepest Formation*	*Depth to Top (Feet)*	*Date of Completion*
1. Ayers (Gas)	Bond	Hiawatha, Hunter 1	29-6N-3W	2,355	Silurian	2,196	5-2
2. Assumption North	Christian	Nat'l. Assoc. Pet. & Cont. Lawrence 34	9-13N-1E	3,021	"Trenton"	2,896	3-7
3. Assumption North	Christian	Lippitt, Jones 3	15-13N-1E	3,004	"Trenton"	2,885	3-28
4. Warrenton-Borton	Coles	Shipman, Snoddy 1	21-14N-14W	1,067	Devonian	1,045	10-24
5. Warrenton-Borton	Edgar	Bridge, Johnson 1	13-14N-14W	1,050	Devonian	858	3-14
6. Dudley	Edgar	Faulkner, Stoneburner 2	3-13N-13W	2,997	St. Peter	2,987	8-29
7. Lawrence	Lawrence	Black, Baltzell 1	2-4N-13W	3,176	Devonian	3,158	12-5
8.	Logan	Allspach, Park 1	7-19N-3W	2,078	St. Peter	2,069	4-11
9.	Macon	Carter, Henneberry 1	25-15N-3E	2,717	Silurian	2,666	4-25
10.	Mason	Pinkston, Ainsworth 1	15-19N-10W	1,684	Shakopee	1,551	6-20
11.	Montgomery	Harmony, Osburne 1	11-10N-1W	2,824	Devonian	2,721	8-1
12.	Montgomery	Reed, Hitchings 2	16-10N-4W	2,003	Devonian	1,898	6-20
13. Waverly	Morgan	Murwood, Points-McMahan Comm. 1	15-13N-8W	1,521	"Trenton"	1,429	10-17
14.	Moultrie	Obering, Reuss 1	32-14N-4E	3,000	Silurian	2,850	10-17
15.	Perry	Schock, Glenn 1	9-4S-3W	2,850	Devonian	2,795	4-4
16.	Piatt	McDowell & Murvin, Schwartz 1	18-19N-5E	1,787	Silurian	1,418	8-29
17.	St. Clair	Kidd, Frailey 1	8-2N-7W	2,349	"Trenton"	2,126	8-8
18.	Sangamon	Werner & Kluzek, Dietel 1	6-15N-3W	2,250	Galena	2,122	1-10
19.	Sangamon	Blakley & Grubb, Cooper 1	14-15N-3W	2,402	"Trenton"	2,280	5-23
20.	Shelby	Lippitt, Parsley 1	34-14N-3E	2,869	Devonian	2,801	3-28
21.	Washington	M. & M. Drlg. Co., Dallman 1	34-3S-2W	4,035	"Trenton"	3,914	1-31

METHODS OF EXPLORATION

The principal methods used in locating exploratory wells continued to be subsurface geology and the reflection seismograph (Table V). The amount of seismograph work decreased from 53 crew months in 1949 to 44 crew months in 1950. Gravity meter work increased from 25 crew months in 1949 to 28 crew months in 1950.

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[6] H. A. Lowenstam, "Niagaran Reefs in Illinois and Their Relation to Oil Accumulation," *Illinois Geol. Survey R.I. 145*, Fig. 9, p. 34.

[7] *Ibid.*, p. 35.

TABLE V. WILDCAT FAR WELLS CLASSIFIED BY METHOD OF LOCATION

Method of Location	*Total*	*Producers*	*Percentage Successful*
Geology	284	13	4.6
Geophysics	14	1	7.1
Geology and geophysics	1	0	0
Non-scientific	26	0	0
Total	325	14	4.3

TABLE VI. NUMBER OF GEOPHYSICAL CREWS ACTIVE IN ILLINOIS DURING 1950 BY MONTHS

	Jan.	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
Seismograph	3	3	3	4	5	4	5	3	3	3	4	4	44
Gravity meter	1	1	1	2	2	3	3	3	3	3	3	3	28
Resistivity	0	0	0	1	2	2	1	1	1	0	0	0	8
Soil analysis	0	0	0	0	0	0	1	1	1	1	1	1	6

INDIANA

BY R. C. COOPER

During 1950, production in Indiana totaled 9,942,000 barrels.[8] This is comparable with a total of 9,696,000 barrels produced during 1949 and represents an increase of 2½ per cent. The total of all tests drilled was 1,530, representing an increase of 19 per cent over 1949. Tests were drilled in 55 counties, the same number as during 1949. This leveling off of the spread of exploration was to be expected since 1949 activity had been expanded greatly because of the sudden revival of interest in reef possibilities. Drilling activity in 1950 was more or less confined to the frontiers established in 1949 and was intensified as drilling commitments expired and geophysical work progressed on blocks taken during the previous year. Of the 11 counties in which the number of producing wells equalled or exceeded dry holes, only Pike and Posey counties were among the leaders in new pools discovered.

The footage drilled during 1950 was 2,637,597 feet. This figure is 12 per cent higher than that of 1949. The total initial production of all completed oil wells in 1950 was 41,236 barrels daily and the total initial production of all gas well completions was 70,219 M cubic feet. This compared with 44,650 barrels of oil completions and 26,000 M cubic feet of gas completions during 1949. Oil completions decreased 8 per cent and gas completions increased 170 per cent.

Discoveries include 33 new fields, 25 extensions, and 39 discoveries of new pay zones in producing areas. The Pocket area of southwest Indiana, which includes Posey, Gibson, and Vanderburgh counties, had 13 new field discoveries, 15 extensions, and 29 new pay discoveries. Ranking the counties by total discoveries of all types, Posey County is first with 37; Gibson second with 17; Knox third with 11; Pike fourth with 8; Daviess fifth with 6; and Dubois sixth with 4. Rank-

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[8] *U. S. Bureau of Mines Monthly Petroleum Statement for December, 1950.*

TABLE VII. DISCOVERY WELLS OF NEW FIELDS IN INDIANA IN 1950

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Initial Production (Barrels)[a]	Date of Completion
26. Barrett-Mitchell North	Gibson	George & Wrather, Temme 1	25-2S-10W	1,884	Lower Ohara	121	8-3
27. Beman South	Knox	D. McCumber, Alexander 1	*42-3N-11W	1,882	Rosiclare	5; 37	5-11
28. Black River	Posey	Ill. Mid-Continent, Ford 1	18-4S-13W	1,880	Clore	56	7-13
29. Bufkin West	Posey	Ryan Oil Co., Buchanan 1	22-6S-13W	2,930; PB 2,771	Aux Vases	123	12-21
30. Claybank	Pike	Ryan & Sharp, Enos Coal Co. 3	4-3S-8W	1,379	Cypress	102; 2	7-27
31. Claypole Hills	Knox	R. L. Rea, Steckler 1	1-1S-12W	1,446	Pennsylvanian	276	10-5
32. Cumback West	Daviess	B. L. S. Drlg. Co., Allison 1	35-2N-7W	1,117	Ste. Genevieve	8; 12	8-10
33. Dickeyville	Warrick	Tecumsah Coal Co., Herald 1	20-4S-7W	1,534	Aux Vases	15	11-2
34. Elberfeld	Warrick	Nat'l. Assoc. Pet., C. Yeck 1	28-4S-9W	2,082; PB 1,907	Ste. Genevieve	22; 8	11-22
35. Elnora	Daviess	E. Mitchell, Woodruff 1	34-5N-6W	1,101	Salem	5; 60	12-21
36. Fairbanks	Sullivan	Carter Oil Co., Drake 1	14-9N-10W	2,558	Devonian	180	9-7
37. Foots Pond	Gibson	Noah Drlg. Co., Mumford Hrs. 2	27-3S-13W	2,448	Cypress	70	9-7
38. Ford South	Posey	Ashland Oil & Ref. Co., Appel 1	28-6S-12W	2,317	Cypress	67; 27	3-16
39. Grafton South	Posey	C. E. Skiles, Alldredge 1	34-6S-14W	2,495	Cypress	51	5-11
40. Hardin Chapel	Knox	N. W. Strange, Holman Est. 1	11-1N-9W	1,538; PB 1,490	Rosiclare	15; 35	6-22
41. Heilman	Warrick	H. C. Farmer, Robinson 1	20-4S-6W	1,293	McClosky	15	6-29
42. Huntingburg	Dubois	Gale & Walters, Struckman 1	17-3S-5W	925	Ste. Genevieve	15; 20	10-19
43. Jasper	Dubois	B. & J. Dev. Co., Hachgensang 1	7-2S-4W	689	Ste. Genevieve	20; 6	4-6
44. Jimtown	Gibson	Galambos, Phillips 1	9-3S-13W	1,172	Pennsylvanian	50; 10	10-26
45. Loogootee North (Gas)	Martin	M. & M. Drlg. Co., Crane 1	4-3N-4W	1,527	Devonian	2,000,000 cu. ft.	1-5
46. Monroe City North	Knox	H. & V. Oil Co., Kinsler-Dreiman 1	†40-3N-9W	1,470	Aux Vases	70	8-10
47. Monroe City West	Knox	Aurora *et al.*, Wells 1	†165-2N-9W	1,788; PB 1,568	Aux Vases	10; 10	6-8
48. Montgomery	Daviess	Tecumsah Coal Co., Tecumsah Coal Co. 1	16-3N-6W	2,095	Salem	30	6-3
49. Oliver South	Posey	Aurora Gas Co., Jackson 1	10-6S-13W	2,794	Aux Vases	170	5-4
50. Princeton East	Gibson	Pappas & Aurora, Nelson 1	3-2S-10W	1,749	Cypress	42; 175	3-16
51. St. Phillips	Vanderburgh	C. E. Skiles, Schrode 1	18-6S-11W	2,367	Cypress	63	11-22
52. Sandborn	Knox	B. L. S. Drlg. Co., Schloat 1	2-5N-7W	1,250; PB 892	Ste. Genevieve	51; 108	7-20
53. Savah	Posey	Wm. Shuller, L. Keck 1	11-6S-14W	2,228	Tar Springs	8	11-9
54. State Line	Vigo	F. B. Cline, J. Crews 3	33-12N-10W	1,854	Devonian	20; 60	10-5
55. Terminal	Posey	Ind. Farm Bureau, Ind. Farm Bureau 1	6-7S-13W	3,030; PB 2,460	Hardinsburg	80	4-6
56. Warrentown East	Gibson	Target Oil Co., Butler 1	15-4S-10W	1,808	Jackson	25	2-9
57. Washington	Daviess	Nat'l. Assoc. Pet., Daviess Co. Board of Comm. 1	13-3N-7W	1,325±	Salem	?	9-?
58. Westphalia	Knox	F. J. Ellison, Wood 1	28-5N-7W	950	Ste. Genevieve	210; 5	8-10

[a] Oil and water.
* Location.
† Military donation.

ing the counties by combined initial potential of discoveries places Posey first with 2,773 barrels; Gibson second with 1,105 barrels; Knox third with 1,057 barrels; Vanderburgh fourth with 327 barrels; Pike fifth with 230 barrels; and Sullivan sixth with 180 barrels.

Perhaps the most important discovery during 1950 was the Ford South pool in Posey County in March. At the end of 1950 it had 38 producing wells, principally from the Cypress sandstone, with minor amounts from the Degonia and Waltersburg sandstones. This pool was producing 1,719 barrels per day at the end of the year and had accumulated 260,000 barrels. Reserves on that date were estimated at approximately 1½ million barrels. This pool was discovered from subsurface information and the accumulation is directly related to structural closure.

TABLE VIII. DISCOVERY WELLS OF ADDITIONAL PRODUCING ZONES IN POOLS IN INDIANA 1950

Pool	*County*	*Company and Farm*	*Location*	*Producing Formation*	*Initial Production (Barrels)*[a]	*Date of Completion*
1. Barrett-Mitchell North	Gibson	Garfield *et al.*, Wilderman 1	31-2S-9W	Aux Vases	275	8-17
2. Bufkin	Posey	H. A. Atha, Williams 1	18-6S-12W	Waltersburg	46; 8	8-17
3. Cahorn West	Posey	L. Angermeier, K. Blackburn 1	23-6S-13W	Degonia; Palestine	43; 1	10-5
4. Claybank	Pike	Ryan & Sharp, Enos Coal Co. 12	3-3S-8W	Upper Cypress	3,000,00 cu. ft.	10-19
5. Claybank	Pike	Ryan & Sharp, Enos Coal Co. 12-A	3-3S-8W	Jackson	25; 50	10-19
6. Cypress Pond	Knox	Carter Oil Co., H. A. Fox 1	11-1S-12W	McClosky	60	1-5
7. Ford South	Posey	W. C. McBride, Feldman 1-A	27-6S-12W	Mansfield	160	5-18
8. Ford South	Posey	S. G. Walker, L. Lurker 1	27-6S-12W	Waltersburg	12; 50	6-15
9. Ford South	Posey	Ashland Oil & Ref. R. V. Stinson 1	33-6S-12W	Degonia	35; 24	11-2
10. Hatfield	Spencer	Ryan Oil Co., G. G. Forler 1	6-7S-7W	McClosky	48; 70	8-24
11. Heusler	Posey	G. L. Reasor, P. Hahn 1	2-7S-12W	Pennsylvanian	150	10-12
12. Lamott	Posey	Magnolia, J. W. Seeger 1	19-7S-12W	Aux Vases limestone	35; 2	1-19
13. Lysle	Gibson	T & H Corp., Deep Vein Coal Co. 1	1-2S-12W	Salem	20; 3	8-7
14. Monroe City North	Knox	Graham Dev. Co., A. Myers 3	*39-2N-9W	Rosiclare	45	12-14
15. Monroe City North	Knox	Graham Dev. Co., A. Myers "B" 1	*38-2N-9W	Aux Vases dolomite	360	10-19
16. Mumford	Posey	C. E. Skiles, Mumford "B" 8	33-3S-13W	Clore	17	8-3
17. Mumford	Posey	Calvert Drlg. Co., Mumford 1	33-3S-13W	Degonia	451	7-13
18. Owensville	Gibson	Ashland Oil & Ref., F. Mount 1	19-3S-11W	Aux Vases	16	8-3
19. Owensville	Gibson	C. C. Clark, M. Montgomery 1	18-3S-11W	St. Louis	7	1-5
20. Owensville South	Gibson	C. E. O'Neal, M. Smith 1	30-3S-11W	Aux Vases limestone	36; 2	7-20
21. Owensville South	Gibson	C. E. O'Neal, Garwood 2	25-3S-12W	Aux Vases sandstone	210	1-19
22. Patoka East	Gibson	J. Richardson, Pauley 1	20-1S-10W	Aux Vases limestone	100	10-12
23. Patoka East	Gibson	J. F. Howard, Ranley Hrs. 1	20-1S-10W	McClosky	40; 60	11-16
24. Piroque	Posey	Sinclair, S. Klein 1	13-8S-14W	Waltersburg	35	4-6
25. Plainville	Daviess	B. L. S. Drlg. Co., Plainville Unit "8" 2	2-4N-7W	Aux Vases limestone	96	3-2
26. Plainville	Daviess	Nat'l. Assoc. Pet., W. C. Foust "A" 1	2-4N-7W	Salem	4,186,000 cu. ft.	6-1
27. Point	Posey	Slagter Prod., J. Harlem 1	31-7S-14W	Degonia	34; 1	8-17
28. Point	Posey	G. Engle & Slagter Prod., Wolf 1	31-7S-14W	Cypress	43; 50	10-19
29. Prairie Creek	Vigo	John Unger, Drake-Shattuc Hrs. 2	16-10N-10W	McClosky	150; 15	7-13
30. St. Wendell East	Posey	Carter Oil Co., F. Wessel 1	25-5S-12W	Aux Vases limestone	108	1-5
31. Spencer	Posey	Carter Oil Co., B. Hastings 3	11-8S-14W	Cypress	56; 8	5-18
32. Springfield Cons.	Posey	G. & W. & Aurora, A. F. Clements 4	29-5S-13W	Degonia	30; 46	1-19
33. Springfield Cons.	Posey	Carter Oil Co., I. Nichols 4	29-5S-13W	Aux Vases	592	2-16
34. Stooker East	Posey	Superior, P. Jordan 1	4-7S-12W	Cypress	50	3-2
35. Terminal	Posey	R. Bauer, Posey Co. Poor Farm 1	6-7S-13W	Tar Springs	46	4-13
36. Union-Bowman	Pike	R. C. Brown, O. R. Phillips 2	29-1N-9W	St. Louis	35	5-18
37. Upton	Posey	C. E. Skiles, Geiger 1	6-7S-14W	Clore	24	8-24
38. Vienna	Vanderburgh	G. L. Reasor, C. B. Alsop 1	30-5S-11W	Cypress	64	8-24
39. Welborn	Posey	V. R. Gallagher, Taran 1	16-6S-14W	Waltersburg	600	12-21

[a] Oil and water.
* Military donation.

The discovery of the Fairbanks pool in Sullivan County, in September, 1950, further augments the Devonian production of Indiana. This new pool had 10 completed producers at the end of 1950 with a daily production of 608 barrels and an accumulation of 41,400 barrels. Most of the production in this pool is under

TABLE IX. DISCOVERY WELLS OF EXTENSIONS TO FIELDS IN INDIANA IN 1950

Pool	County	Company and Farm	Location	Total Depth (Feet)	Producing Formation	Initial Production (Barrels)[a]	Date of Completion
1. Arda	Pike	United Drlg. Co., E. Flint 1	14-1N-8W	1,285	Aux Vases	2½; 5	8-31
2. Barrett-Mitchell North	Gibson	Garfield, Wilderman 1	31-2S-9W	1,850	Aux Vases	275	8-17
3. Caborn	Posey	Ryan Oil Co., Egli Hrs. 1	18-6S-12W	2,385	Cypress	22; 10	1-12
4. Claybank	Pike	Ryan & Sharp, Enos Coal Co. 12-A	3-3S-8W	1,240	Jackson	25; 50	10-19
5. Darmstadt	Vanderburgh	Reasor, H. P. Stropp 1	11-5S-11W	2,470	Ste. Genevieve	200	8-24
6. Ford South	Posey	S. G. Walker, L. L. Lurker 1	27-6S-12W	1,830	Waltersburg	12; 50	6-16
7. Ford South	Posey	Ashland, J. A. Eisterhold 1	33-6S-12W	2,350	Cypress	80	10-12
8. Francisco South	Gibson	George & Wrather, Weber 1	36-2S-10W	1,963	Aux Vases	96	6-28
9. Jasper	Dubois	B. & G. Dev. Co., Warner 2	7-2S-4W	672	Ste. Genevieve	12; 3	6-22
10. Jasper	Dubois	Patoka Oil & Gas Co., L. Mendel 1	12-2S-5W	694	Ste. Genevieve	6; 3	5-25
11. Lamott	Posey	W. C. Heppard, Thomas 1	25-7S-13W	1,921	Tar Springs	41; 40	11-2
12. Loogootee North (Gas)	Martin	F. Lyons, C. D. Waggoner 1	34-4N-4W	1,468	Chattanooga shale	250,000 cu. ft.	11-22
13. Monroe City North	Knox	Graham, Meyers "B" 1	*38-2N-9W	1,505	Aux Vases dolomite	360	10-19
14. Mumford	Posey	Schoonmaker, T. F. Mumford 1	7-4S-13W	2,566	Cypress	50; 1	7-27
15. New Harmony East	Posey	Rush Creek Oil, P. Shoultz 2	12-5S-14W	2,049	Palestine	50	1-12
16. Owensville North	Gibson	A. W. Cherry, Miller 1	12-2S-12W	2,400; PB 2,337	Cypress; Ste. Genevieve	17; 10	7-20
17. Point	Posey	Slagter, Harlem 1	31-7S-14W	1,869; PB 1,845	Degonia	34; 1	8-17
18. Stooker East	Posey	Superior, Phillip Jourdan 1	4-7S-12W	2,300	Cypress	50	3-2
19. Trenton	Shelby	Snider & Kirklin, Geo. Moore 1	35-13N-6E	950	Trenton	20	9-14
20. Troy	Perry	R. Jarboe, A. Harth 1	32-5S-3W	576; PB 546	Cypress	8; 6	4-13
21. Union-Bowman	Pike	F. B. Cline, Enos Coal Co. 1	17-1S-8W	1,612; PB 1,565	Aux Vases; Rosiclare	40; 15	9-21
22. Union-Bowman	Pike	F. Lyons, W. C. Grubb 1	4-1S-9W	1,482	Cypress	1,300,000 cu. ft.	11-9
23. Union-Bowman	Gibson	Hayes Drlg. Co., Graulich 1	33-1S-9W	1,691; PB 1,612	Aux Vases	40	10-12
24. Upton	Posey	C. E. Skiles, B. Geiger 1	6-7S-14W	2,896; PB 1,848	Clore	24	8-24
25. Welborn	Posey	V. R. Gallagher, A. Taran 1	16-6S-14W	2,345; PB 2,133	Waltersburg	600	12-21

[a] Oil and water.
* Military donation.

restricted flow and all is from the Devonian limestone, which apparently is draped over a Silurian reef. This discovery has been attributed to seismograph.

In Knox County the Monroe City North pool was discovered in October, 1950, and at the end of the year there were 7 producing wells, 6 of which were from the Aux Vases limestone and one from the McClosky limestone. At the end of the year the daily production was 727 barrels and the accumulated production 40,896 barrels. This accumulation appears to be due to a pinch-out of porosity rather than to structural closure.

Two discoveries during 1950 which appear to be of some significance have been developed by operators who have not yet released any specific information. One of these is the Montgomery pool in Daviess County. This pool was discovered by a coal company using coal data supplemented by seismograph. At the end of 1950, 9 producing Salem limestone wells had been completed with the highest initial potential reported to be 180 barrels per day. Accumulative figures are not yet available. Although very little is known of the stratigraphic information in this pool, its general outline and geographic position would suggest that it is related to an underlying reef.

TABLE X. SELECTED LIST OF DRY TESTS IN INDIANA IN 1950

County	*Company and Farm*	*Location*	*Total Depth (Feet)*	*Deepest Formation Tested*
1. Daviess	W. Heppard, R. Norris 1	34-2N-6W	2,269	Trenton
2. Floyd	W. Brazil, Brazil 1	22-2S-5E	1,600	Trenton
3. Greene	W. Hostettler, Hostettler-Ammer 1	31-6N-4W	1,713	Silurian
4. Greene	F. Lyons, E. Blanton 1	1-8N-7W	3,527	Prairie du Chien
5. Greene	Nat'l. Assoc. Pet., J. Shake 1	34-6N-7W	2,840	Trenton
6. Greene	C. E. Skiles, S. Newson 1	32-8N-5W	2,574	Trenton
7. Greene	C. E. Skiles, J. Stephens 1	16-8N-4W	2,413	Trenton
8. Jackson	A. Seevers, O. Griffin 1	20-5N-4E	462	Devonian
9. LaGrange	Trico Dev. Co., F. & V. Spero 1	13-37N-11E	782	Trenton
10. Orange	A. Brewer, H. Tolliver 1	32-3N-1W	1,266	Devonian
11. Parke	Carter Oil Co., F. Blair 1	30-14N-8W	2,000	Silurian
12. Parke	Clouse, Clouse 1	30-15N-8W	1,642	Silurian
13. Parke	J. McGuire, Jeffries 1	19-15N-6W	2,095	Trenton
14. Vigo	Alco Engineer, Halstead *et al.* 1	11-11N-9W	1,885	Trenton
15. Vigo	Clouse, Lange 1	12-13N-7W	2,352	Trenton
16. Wayne	P. Gordon, M. Doddridge 1	23-15N-13E	3,907	Granite

The other discovery on which information is being withheld is the Washington pool in Daviess County which was brought in in September, 1950, and had 12 producing wells on December 31, 1950. The depth of completions indicates that the Salem limestone is the producing formation. Unconfirmed information indicates that approximately 145 barrels of oil per day were being run at the close of 1950 and that the accumulative production on that date was more than 5,000 barrels. This discovery was made by an operator who is known to be using seismograph as a principal means of exploration. This pool is very likely related to a Silurian reef.

In Daviess County the Plainville pool was discovered in 1949 but had only 4 completed wells at the end of last year's report. At the end of 1950 this pool had 54 producing oil wells and 4 gas wells. Operators were running approximately

1,700 barrels of oil per day and the accumulated production was 700,000 barrels from the Aux Vases limestone, McClosky limestone, and Devonian limestone. The gas is from the Salem limestone. This pool has been attributed to seismograph and is thought to be producing from beds draped over a Silurian reef.

Exploration and leasing continue active in the marginal counties of the Illinois basin, particularly in the belt along the northeastern margin where Silurian reefs are known to have resulted in accumulation of oil in younger beds and in the Pocket area where Pennsylvanian and Chester sandstones together with the McClosky oölitic limestone porosity zones offer a larger number of pay possibilities through structural closúre and porosity pinch-out traps. Leases are becoming increasingly scarce and prices are increasing daily. Through the year 1950 there was a continuous and intensive search for structures by geophysical methods, particularly seismograph and gravity meter. This is particularly true of the belt in which reef accumulations are expected. Some core drilling was done and a few stratigraphic tests were drilled. Prospects for 1951 are good and an active program of leasing and exploration is anticipated.

TABLE XI. NUMBER OF GEOPHYSICAL CREWS ACTIVE IN INDIANA DURING 1950 BY MONTHS

	Jan.	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	*Total*
Seismograph	7	7	10	9	8	9	11	11	11	11	8	5	107
Gravity meter	4	5	4	3	3	3	3	2	2	2	1	1	33